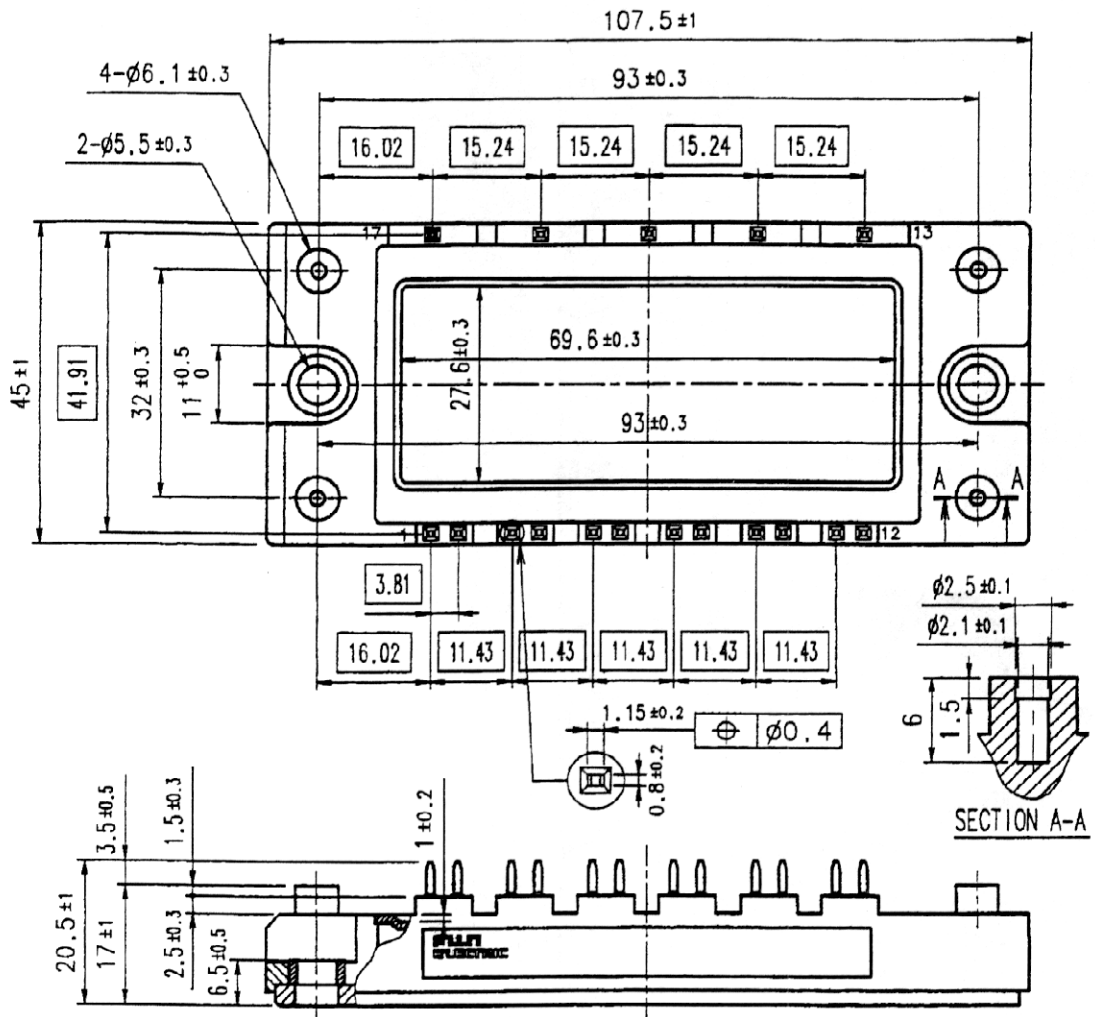


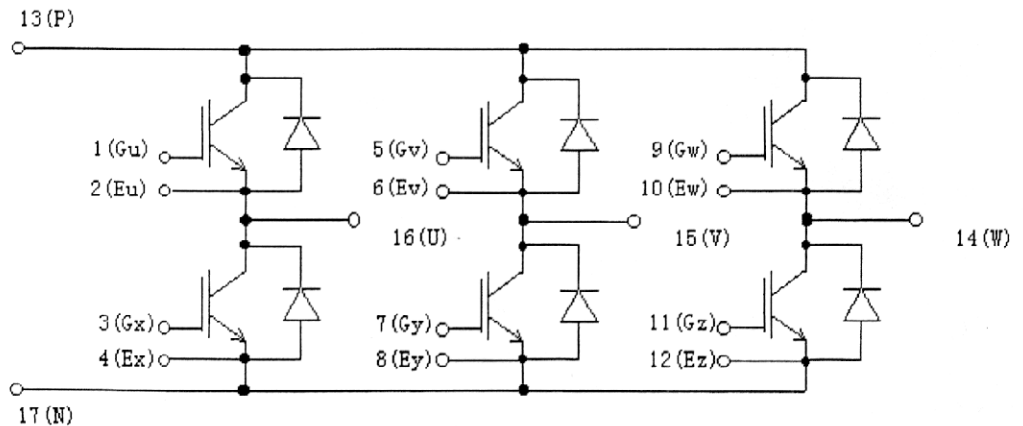
Target Specification of 6MBI30S-060

1. Output Drawing (Unit : mm)



□ shows theoretical dimension.

2. Equivalent circuit



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DRAWN June 1 - '99	T. Kuroki		
CHECKED June 4 - '99	S. Kiyota	T. Miyasaka	
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3. Absolute Maximum Ratings (at Tc= 25°C unless otherwise specified)

Items	Symbols	Conditions	Maximum Ratings	Units
Collector-Emitter voltage	VCES		600	V
Gate-Emitter voltage	VGES		±20	V
Collector current	Ic	Continuous	30	A
	Ic pulse	1ms	60	
	-Ic		30	
	-Ic pulse	1ms	60	
Collector Power Dissipation	Pc	1 device	120	W
Junction temperature	Tj		150	°C
Storage temperature	Tstg		-40~ +125	°C
Isolation voltage ^{(*)1}	Viso	AC : 1min.	2500	V
Mounting Screw Torque ^{(*)2}			3.5	N · m

(*)1 All terminals should be connected together when isolation test will be done.

(*)2 Recommendable Value : 2.5~3.5 N · m (M5)

4. Electrical characteristics (at Tj= 25°C unless otherwise specified)

Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Zero gate voltage Collector current	ICES	VGE = 0 V, VCE = 600 V			1.0	mA
Gate-Emitter leakage current	IGES	VCE = 0 V, VGE = ±20 V			200	nA
Gate-Emitter threshold voltage	VGE(th)	VCE = 20 V, Ic = 30 mA		7.8		V
Collector-Emitter saturation voltage	VCE(sat)	VGE = 15 V, Tj = 25 °C		1.95		V
		Ic = 30 A, Tj = 125 °C		2.1		
Input capacitance	Cies	VGE = 0 V		3000		pF
Output capacitance	Coes	VCE = 10 V		540		
Reverse transfer capacitance	Cres	f = 1 MHz		360		
Turn-on time	ton	Vcc = 300 V		0.45		μs
	tr	Ic = 30 A		0.25		
	tr _(t)	VGE = ±15 V		0.08		
Turn-off time	toff	RG = 82 Ω		0.40		
	tf			0.05		
Forward on voltage	VF	IF = 30 A, Tj = 25 °C		1.95		V
		Tj = 125 °C		1.8		
Reverse recovery time	trr	IF = 30 A				ns

5. Thermal resistance characteristics

Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Thermal resistance (1 device)	Rth(j-c)	IGBT			1.04	°C/W
		FWD			2.00	
Contact Thermal resistance	Rth(c-f)	with Thermal Compound (※)		0.05		

※ This is the value which is defined mounting on the additional cooling fin with thermal compound.

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